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United States
Department of
Agriculture

Forest Service
Southern Region

SENSITIVE PLANTS OF THE OZARK-ST FRANCIS NATIONAL FORESTS

SENSITIVE PLANTS OF THE OZARK-ST. FRANCIS NATIONAL FORESTS

This booklet will help you to identify sensitive plant species that occur on the Ozark-St. Francis National Forests. Sensitive plants are: Those plant species identified by the Regional Forester for which population viability is a concern, as evidence by:

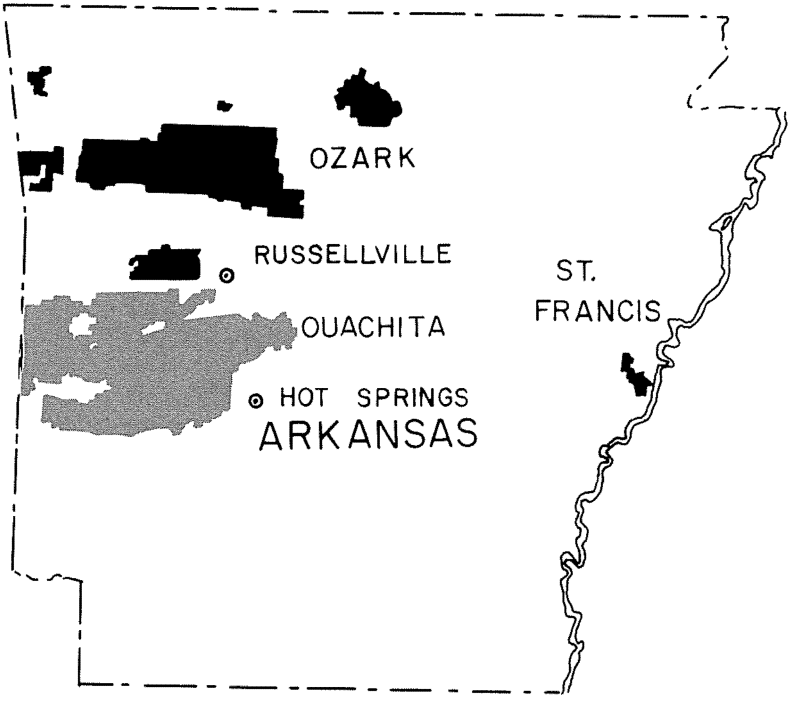
a. significant current or predicted downward trends in population numbers of density.

b. significant current or predicted downward trends in habitat capability which would reduce the species' existing distribution.

The basic information provided in this booklet is the result of an inventory of threatened, endangered and sensitive species undertaken by Dr. Gary E. Tucker, Arkansas Tech University, Russellville, Ark. 72801.

Pictures were provided by Dr. Tucker, unless otherwise noted below the picture.

Identifying characters include those that distinguish the species listed from a "look alike" by using family generic species and varietal features.



Bush's Poppy Mallow FORB

Carl Hunter

Name: Bush's Poppy Mallow
(Calliroe papaver var. bushii)

Family: Mallow (Malvaceae)

Flowering Period: June to August

Fruiting Period: July to September

Habitat: Rocky woods, glades, prairies, open roadsides, ravine bottoms.

Identifying Characters: This plant is sometimes difficult to separate from some of the other species in the genus, but the presence of three bractlets (with at least one of the bractlets separated by 1-3 mm. from the calyx) below the calyx and hairs on the stem, spreading away from the stem or pointing toward the base of the stem separates it from other poppy mallows. The plant is a perennial herb usually growing to heights of no more than 8-9 decimeters (no more than 3 feet). Flowers are large, showy and deep rose in color.

Counties: Benton, Carroll, Logan, Marion, Van Buren, Washington

District: Magazine and Boston Mountain (Wedington Unit)

Ozark Chinquapin TREE

Name: Ozark Chinquapin
(Castanea pumila var. ozarkensis)

Family: Beech (Fagaceae)

Flowering Period: May to June

Fruiting Period: September

Habitat: Dry upland forests dominated by some mixture of oak and hickory. Usually found in dry, acid soils on ridge tops, upper slopes (often quite steep) adjacent to ravines, and on the tops of sandstone bluffs. Also may be found on well drained sites that have good moisture supplies, and often it is found at the base of a talus slope composed of large rock fragments fallen away from a bluffline.

Identifying Characters: Ozark Chinquapin is a tree, to 20 meters (66 feet) tall, but generally much less, (large trees common in the past, but seldom found today), to diameter of 61 centimeters (ca. 2.5 ft.) or more, but generally less. Sprouting readily from stumps, often with a clump of several to many stems from the base. The twigs are slender, light brown and covered with dense pubescence when young, gray and glabrous when older. Bark, light brown to reddish-brown or grayish, with broad flat ridges that break into loose platelike scales. Fruit, a prickly burr but rarely produced because of chestnut blight.

Counties: Every county of the Interior Highlands Region and extending into a few of the counties in the Coastal Plain.

Districts: All Ozark National Forest Districts.

Yellowwood TREE

Name: Yellowwood
(Cladrastis kentuckea)

Family: Pea (Fabaceae or Leguminosae)

Flowering Period: May to June

Fruiting Period: July to August

Habitat: Rich wooded limestone slopes, bluffs, ravines, benches, and other moist and rugged terrain. Appears to have a calcareous requirement as it typically is found on soils derived from limestone in addition to shales and sandstones having a calcareous matrix; it has not been found on acid sandstones lacking calcareous cementing material.

Identifying Characters: The Yellowwood is a tree to 20 meters (66 feet) tall. The bark is smooth and gray in color, odd pinnately compound leaves in which the leaflets usually are alternate on the rachis (axis bearing leaflets). The wood is yellow and the racemes of snowy-white flowers are followed by pods that rather resemble soybean pods (although smooth and not hairy as on the soybean plant).

Counties: Benton, Marion, Baxter, Stone, Newton, Washington, Crawford, Franklin, Pope, Conway

District: Throughout the Ozark National Forest on every District.

Showy-Lady-Slipper, Queen Lady-Slipper FORB

Name: Showy-Lady-Slipper, Queen Lady-Slipper
(Cypripedium reginae)

Family: Orchid (Orchidaceae)

Flowering Period: May-June

Fruiting Period: June

Habitat: Moist crevices (narrow opening resulting from crack in limestone) and seepage areas of limestone bluffs bordering narrow valleys of small streams. Plants are usually well-exposed on the bluff faces and not particularly shaded by other vegetation.

Identifying Characters: Showy Lady-slipper is an herb that grows to about 5 decimeters (ca. 1.5 to 2 feet) tall (based on Arkansas material); the species may grow taller elsewhere in its range. It is the only Lady-slipper in Arkansas having white or pink flowers.

County: Stone

District: Sylamore

Moore's Delphinium FORB

Name: Moore's Delphinium
(Delphinium newtonianum)

Family: Buttercup (Ranunculaceae)

Flowering Period: June-July

Fruiting Period: July

Habitat: Open woods and upper slopes of ridges

Identifying Characters: The only species of Delphinium in Arkansas having a diffusely branched panicle (a loose, irregularly compound flower arrangement with stalked flowers); other species of the genus have their flowers attached to elongated, unbranched racemes. This plant gets to 7 decimeters (ca. 1 to 2 feet) tall.

Counties: Pope, Johnson, Searcy and Newton

Districts: Bayou, Pleasant Hill, Buffalo, Sylamore

French's Shooting-Star FORB

Name: French's Shooting-Star
(Dodecatheon frenchii)

Family: Primrose (Primulaceae)

Flowering Period: April to May

Fruiting Period: May to June

Habitat: Shaded ledges and mesic faces of sandstone bluffs; often it is found under shaded, cave-like shelters at the bases of wet, overhanging cliffs and bluffs. Sites visited have been on wooded hillsides or bluffs in the forest.

Identifying Characters: French's Shooting-Star grows to 1.5 decimeters (ca. 5 foot or less) tall. Tree is easily recognizable as a Shooting-star by its basal leaves and cluster of nodding flowers having strongly backward pointing petals and exserted stamens. However, to distinguish it from its close relatives is perhaps not so easy. Probably the best character of differentiation is the abruptly narrowed petiole (leaf stalk) unlike the common Shooting-Stars with gradually tapering blades. French's Shooting-Star is more diminutive and characterized by thinner leaves.

County: Newton

District: Buffalo

Openground Whitlow-Grass

FORB

Name: Openground Whitlow-Grass
(Draba aprica)

Family: Mustard (Brassicaceae)

Flowering Period: March to April

Fruiting Period: April to May

Habitat: Shallow, sandy soils, having some organic matter in them; these soils usually overly shale or sandstone. Sometimes it grows in light shade or open woods but also grows in full sun.

Identifying Characters: *Draba aprica* is taxonomically closest to *D. brachycarpa,* a common species in the Ozarks. The species are distinct, however, when examined critically. The ovaries and fruits of *D. aprica* are densely stellate hairy and the plant is much more slender and erect, growing to 3.5 dm tall.

Counties: Washington, Pope, Stone, Montgomery, Polk

District: Known only from Sylamore, but highly probable on the Magazine District and Boston Mountain District (Wedington Unit) and probably elsewhere.

Small-Headed Pipewort FORB

Name: Small-Headed Pipewort
(Eriocaulon kornickianum)

Family: Pipewort: (Eriocaulaceae)

Flowering Period: July to August

Fruiting Period: July to August

Habitat: Upland seeps and sphagnum bogs; these sites are usually permanently moist to wet and in full sun. All sites seen by the contractor have been on sandstone or syenite outcrops or on sandy sediments of the coastal plain.

Identifying Characters: The genus *Eriocaulon* is the only genus of the family found in Arkansas and the only species to be expected in the Ozark National Forest. *E. kornickianum* is the only member of the genus occurring within the Interior Highlands, so there is no cause for confusion with any other species. The plants are low, probably short-lived, forming small rosettes or tufts of rosettes. The floral arrangement is borne on a scape (stalk) 1-5 centimeters (2 inches or less) long.

Counties: Madison, Benton, Logan, Pulaski, Saline, Calhoun

District: Has been found on Magazine, highly probably on the Boston Mountain and probably elsewhere.

Running Strawberry-Bush SHRUB

Name: Running Strawberry-Bush
(Euonymus obovatus)

Family: Bittersweet (Celastraceae)

Flowering Period: April to May

Fruiting Period: September to October

Habitat: North-facing, wooded slopes and bluffs. Each site is characterized by high shade and moist soils overlying limestone bedrock. Seepage is common at the sites during the early part of the growing season.

Identifying Characters: The plant is a trailing shrub, rooting at nodes, with ascending branchlets to 2.5 decimeters (ca. 2 feet are less). *Euonymus obovatus* is distinguished from the closely-related strawberry bush (*Euonymus americanus*) primarily by growth form and leaf outline. The Running Strawberry-Bush is a trailing shrub with markedly obovate leaves at the ends of the twigs; Strawberry-Bush typically is an erect shrub with leaves that are widest at the base or at the middle, but not at the leaf tip.

County: Stone

District: Sylamore

Geocarpon FORB

Name: Geocarpon
(Geocarpon minimum)

Family: Pink (Caryophyllaceae)

Flowering Period: March to April

Fruiting Period: March to May

Habitat: Upland sandstone glades in moist, shallow depressions and particularly where seepage water runs through mats of moss.

Identifying Characters: An extremely small herb, maroon in color with opposite leaves.

County: No Forest counties, but highly probable on several Ozark National Forest Districts.

Arkansas Alumroot FORB

Name: Arkansas Alumroot
(Heuchera villosa var. arkansana)

Family: Saxifrage (Saxifragaceae)

Flowering Period: August to November

Fruiting Period: August to November

Habitat: Sandstone rocks or on soils derived from sandstone; on bluffs and at the bases of north-facing slopes; and on shade seepage slopes. Usually it is found on the exposed bluff or rock faces or other openings in an otherwise shaded environment. The Arkansas Alumroot is a perennial herb from a short rhizome, acaulescent (without leafy stem), to 2.5 decimeters (ca. 1 foot or less) tall.

Identifying Characters: The Arkansas Alumroot is very similar to the Hairy Alumroot; in contrast with Hairy Alumroot, it is marked by its distinctly campanulate (bell-shaped) floral cup, leaves with appressed white hairs and its generally shorter flowering stems.

Counties: Benton, Newton, Pope, Stone and Washington

District: Pleasant Hill, Buffalo, Bayou, Sylamore, Boston Mountain

Butternut TREE

Name: Butternut
(Juglans cinerea)

Family: Walnut (Juglandaceae)

Flowering Period: April to May

Fruiting Period: October

Habitat: Rich, moist soils of bottomlands in the Ozark, usually close to a small stream. Slopes and ravines. The common environmental factor appears to be a requirement for good drainage. Butternut also appears to be intolerant of shade.

Identifying Characters: Butternut is a tree to about 30 meters (ca. 100 feet) tall potentially, but usually much less. Butternut is very similar in appearance to black walnut when in leaf; it differs from black walnuts, however, in having leaves that are much more clammy or sticky to the touch because of glandular hairs and in having a chambered pith of a dark chocolate-brown color. The nuts of butternut are elongated, whereas the nuts of black walnut are round or roundish; also the nuts are more deeply sculptured than black walnut and while the black walnut nut is black in color, the nut of butternut is brown. The bark characters differ. Black walnut has a dark-colored bark while butternut has a very whitish or grayish bark at maturity.

Counties: Benton, Newton, Marion, Baxter, Stone

Districts: Boston Mountain, Pleasant Hill, Buffalo, Sylamore

Monkeyflower FORB

Name: Monkeyflower
(Mimulus floribundus)

Family: Snapdragon (Scrophulariaceae)

Flowering Period: May to July

Fruiting Period: July

Habitat: Full sun on rock outcrops and bluffs that are wet from springs or seepage. Plants often grown in wet shaley or clayey coils developing on ledges of well-stratified, nearly vertical, wet sandstone or limestone bluffs. Full sunlight, at least for several hours a day, and wet substrate appear to be necessary components of the habitat.

Identifying Characters: This monkeyflower is fairly distinctive in appearance; no other yellow-flowered member of the Scrophulariaceae occurs on wet bluff faces of northwest Arkansas, at least no other member of the family having weak spreading stems that are viscid or slimy to the touch. The very small flowers that are irregular and somewhat two-lipped are of additional value. The plants are erect to nearly prostrate and grow to a height of 0.5 to 2.5 decimeters (less than one half foot to 1 foot).

Counties: Washington, Newton, Searcy, Stone

Districts: Sylamore, Pleasant Hill, Boston Mountain, Buffalo, Bayou

Alabama Snow-Wreath SHRUB

Name: Alabama Snow-Wreath
(Neviusia alabamensis)

Family: Rose (Rosaceae)

Flowering Period: April

Fruiting Period: May to June

Habitat: Talus slopes (slope formed from an accumulation of rock debris) below bluff lines of sandstone, limestone or shale. Normally grows under shaded conditions regardless of the exposure.

Identifying Characters: Alabama Snow-Wreath is a shrub, 1-2 meters (ca. 3 to 7 feet) tall, with arching branches that spread from rootsuckers. It has five leaf-like sepals persisting through the growing season. When in flower, petals are absent but color is provided instead by the brush of numerous white stamens (male reproductive parts).

Counties: Newton, Pope, Conway, Faulkner

District: Bayou, Henry Koen Experimental Forest

Showy Orchis FORB

Name: Showy Orchis
(Orchis spectabilis)

Family: Orchid (Orchidaceae)

Flowering Period: April to May

Fruiting Period: May to July

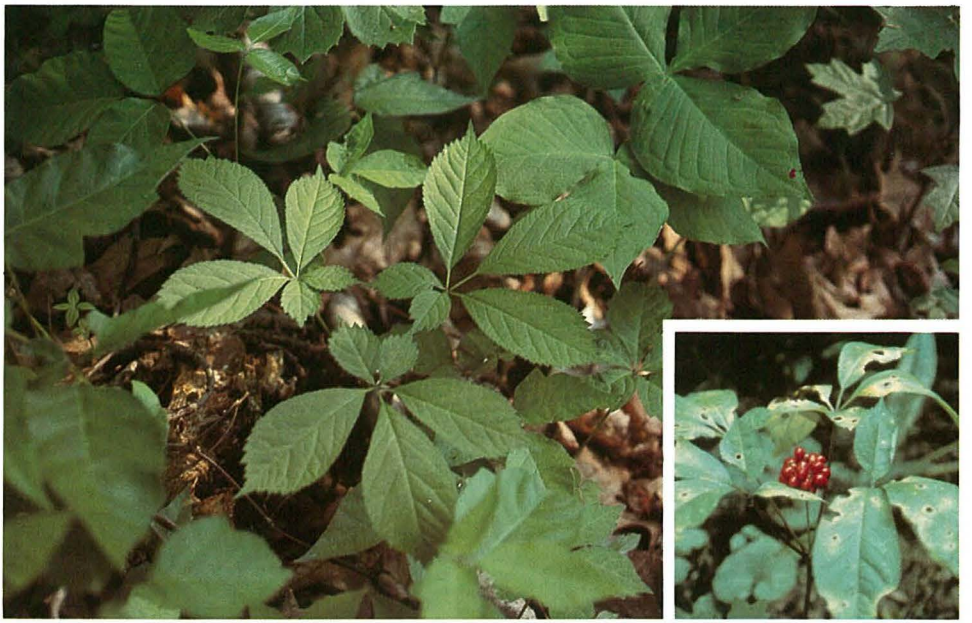
Habitat: Rich woods having soils rich in organic matter. It may be found on steep slopes, sometimes at the top of the slope if moist and sometimes at the base of the slope. Sometimes it is associated with the slopes of ravines. Occasionally, Showy Orchis is found in rich soils of lower slopes and bottoms.

Identifying Characters: The Showy Orchis in flower is a very distinctive species. It is marked by the relatively short flower stalk having two to 12 flowers of white and pink or lavender and by the pair of large, glossy, green leaves at the base of the plant. It is an herb that grows to 8-25 centimeters (ca. 3 to 10 inches) tall.

Counties: Washington, Newton, Searcy, Stone, Van Buren, Logan

Districts: Boston Mountain, Buffalo, Pleasant Hill, Bayou, Sylamore

Ginseng FORB



Name: Ginseng
(Panax quinquefolia)

Family: Aralia (Araliaceae)

Flowering Period: May to June

Fruiting Period: August to October

Habitat: Ginseng is a shade plant, typically occurring on well-drained slopes of rich woodlands. Habitat requirements are deep, rich soils, adequate moisture, good drainage, full shade and abundant ground litter.

Identifying Characters: This herb grows to 2-6 decimeters (ca. 2 feet or less). Ginseng is sometimes confused with immature Virginia Creeper but the leaflets of Virginia Creeper are sessile, while those of Ginseng are on definite stalks. The root system of Virginia Creeper is fibrous while those of Ginseng are much-thickened (even in young plants).

Counties: Benton, Washington, Crawford, Franklin, Madison, Newton, Johnson, Pope, Van Buren, Stone

Districts: Boston Mountain, Pleasant Hill, Buffalo, Bayou

Sand Phlox

FORB

Name: Sand Phlox
(Phlox bifida)

Family: Phlox (Polemoniaceae)

Flowering Period: March to May

Fruiting Period: June-July

Habitat: Rocky or dry, upland woods, banks of roadcuts, ledges and bluffs, on rocky, wooded banks, in prairie-like openings in upland woods, on cedar glades and along streams.

Identifying Characters: Sand Phlox is similar to cultivated thrift, *Phlox subulata.* Both species are clump-forming, although *P. bifida* has a tendency to be a little more straggly and less well-kempt in appearance. The petals of *P. bifida* are deeply notched, often nearly to the base, while those of cultivated thrift are notched shallowly. Petal color usually is much more intense in the cultivated thrift varities that are commonly planted.

Counties: Benton, Washington, Madison, Newton, Searcy, Stone, Marion

Districts: Sylamore, Boston Mountain, Buffalo, Pleasant Hill

Maple-Leaved Oak

TREE/SHRUB

Name: Maple-Leaved Oak
(Quercus shumardii var. acerifolia)

Family: Beech (Fagaceae)

Flowering Period: April

Fruiting Period: September to October

Habitat: Open woods, along ledges and cliffs and on the upper slopes of the rocky edge of the plateau surface of Magazine Mountain.

Identifying Characters: Maple-Leaved Oak is a shrub or small tree, 3-9 meters (ca. 9 to 30 feet) tall. There is no other oak species that typically grows in shrubby form and with leaves that tend to have palmate lobing.

County: Logan

District: Magazine

Prickly Gooseberry
Pasture Gooseberry

SHRUB

Name: Prickly Gooseberry, Pasture Gooseberry
(Ribes cynosbati)

Family: Saxifrage (Saxifragaceae)

Flowering Period: April to June

Fruiting Period: July to September

Habitat: Rocky woods and north-facing, shaded bluffs and wooded ledges at high elevations.

Identifying Characters: Low, scraggly, prickly shrub with rigid arching, spreading or trailing branches usually no more than 1 meter (ca. 3 feet) tall. *Ribes cynosbati* is the only gooseberry species in Arkansas that has a prickly berry.

Counties: Logan, Polk, Garland

District: Magazine

Climbing Magnolia, Smooth Magnolia Vine VINE

Name: Climbing Magnolia, Smooth Magnolia Vine
(Schisandra glabra)

Family: Schisandra (Schisandraceae)

Flowering Period: May to June

Fruiting Period: July to August

Habitat: Mesic forest communities, slopes and in ravines of the eroding loess soils.

Identifying Characters: *Schisandra* is the only high-climbing woody vine in the Saint Francis Forest that has simple, alternate, glossy, green leaves with pinnate venation and lacking both tendrils and prickles. Flowers and fruit are both red.

Counties: Lee, Phillips, Cross, St. Francis

District: St. Francis

Ovate-Leaved Catchfly FORB

Name: Ovate-Leaved Catchfly
(Silene ovata)

Family: Pink (Caryophyllaceae)

Flowering Period: August to October

Fruiting Period: October to November

Habitat: Talus slope beneath a bluffline; the bluffline itself is mostly sandstone, but the sandstone is interbedded with shaly strata. The shaly material has accumulated downslope on the talus and that is the material in which the Ovate-Leaved Catchfly is rooted.

Identifying Characters: *Silene Ovata* is an herb that grows erect, to 1 meter (ca. 3 feet) in height but generally less. The most distinctive feature of the plant is its flowers. The flowers are white and composed of petals that are deeply cut into linear segments. No other member of the Caryophyllaceae in Arkansas has such highly dissected petals.

Counties: Pope, Stone, Benton

District: Bayou, Sylamore, Boston Mountain

Epling's Hedge Nettle

FORB

Karen Haller

Karen Haller

Name: Epling's Hedge Nettle
(Stachys eplingii)

Family: Mint (*Labiatae or Lamiaceae*)

Flowering Period: June to July (or rarely August)

Fruiting Period: September to October

Habitat: Epling's Hedge Nettle is a woods plant, apparently adapted to moist organic-rich soils, good drainage, shade and probably a low evaporation rate. Typically, it is found in the same type of habitat in which Wood's False Hellebore *(Veratrum woodii)* grows.

Identifying Characters: This plant is a perennial herb that grows to heights of 8.5 to 15.0 decimeters (ca. 3-6 feet). The leaves are large (6.5 to 12.5 cm. long and about 3.5 cm. wide), dark green and rank-smelling when fresh. Flowers are typical for the Mint Family, characterized by a well-developed two-lipped condition; flowers are white with purple or lavendar stripes or lines.

Counties: Logan, Polk

District: Magazine

Name: Dwarf Filmy-Fern
(Trichomanes petersii)

Family: Filmy Fern (Hymenophyllaceae)

Spore Formation: June to August

Habitat: Sandstone boulders and ledges, usually in narrow drainage ravines.

Identifying Characters: The fronds of this plant are tiny, reaching a length of only 1 to 2 centimeters (ca. 1/2 to 1 inch) or a little more. The Dwarf Filmy-Fern is extremely small for a fern, usually no more than an inch tall; the leaves are extremely thin, being only a single cell in thickness and are easily confused with liverworts. *Trichomanes boscianum* is very similar to *T. petersii* but differs in that the leaves of *T. boscianum* are pinnately divided and usually are several inches in length, while those of *T. petersii* are not pinnately divided and much smaller in size.

Counties: Pope and Stone

Districts: Bayou, Sylamore

White Trillium
White Wake Robin

FORB

Name: White Trillium, White Wake Robin
(Trillium flexipes)

Family: Lily (Liliaceae)

Flowering Period: April to May

Fruiting Period: June to July

Habitat: Steep, northeast-facing slope having an overstory dominated by oaks. Rich woods on slopes or bluffs or in valleys of ravines and along streams. Rich, moist, shaded woods.

Identifying Characters: The stem of this plant is erect and 2 to 4 decimeters (ca. .5 to 1.5 feet) tall at flowering. The White Trillium is a very distinctive species because of its relatively large, stalked white flower; the only other white flowered trillium in the state is the much smaller *T. pusillum* var. *ozarkanum*. The diamond-shaped leaves of White Trillium are very distinctive.

County: Stone

District: Sylamore

Ozark Trillium FORB

John Schwegman

Name: Ozark Trillium
(Trillium pusillum var. ozarkanum)

Family: Lily (Liliaceae)

Flowering Period: March to April

Fruiting Period: May to June

Habitat: Acid soils of oak-hickory or oak-pine forests, shallow draws in thin cherty or flinty soils.

Identifying Characters: Differs from the only other white-flowered trillium that occurs in the state, *T. flexipes,* in that the leaves are: ovate to lanceolate, 1 to 2.5 centimeters (ca. .5 to 1) inch wide; the flower stalk is usually 1 to 3 centimeters (ca. .5 to 1.5) inches tall and occurs in dryish woods. Considerably smaller than *T. flexipes.*

Counties: Benton, Boone, Carroll, Madison, Montgomery, Newton, Polk, Pulaski, Washington

District: Has not yet been found on the Ozark National Forest, but highly probable for the Boston Mountain (Wedington Unit) and Sylamore Districts (and possibly other areas of the Forest).

Wood's False Hellebore

FORB

Name: Wood's False Hellebore
(Veratrum woodii)

Family: Lily (Liliaceae)

Flowering Period: July to September

Fruiting Period: Mature fruits not seen, but presumably fruiting August through October.

Habitat: Usually occurs on north- or east-facing wooded slopes at high elevations. The habitat typically has a high diversity of herbaceous species and is characterized by high levels of organic materials in the soils.

Identifying Characters: A perennial herb growing to heights of 1.3 to 1.8 meters (4 to 5 feet) at anthesis. This plant is easily recognized in the sterile leafy condition on account of its broad, prominently plaited, richly green basal leaves. Flowering appears to be very irregular in the few localities known; some years it appears that either no or very few plants flower. Flower color appears to vary from green to purple, usually but not always a dark maroon in color when fresh.

Counties: Logan, Montgomery, Polk

District: Magazine

Allegheny Cliff-Fern FERN

Name: Allegheny Cliff-Fern
(Woodsia scopulina var. appalachiana)

Family: Aspidium (Aspidiaceae)

Spore Formation: July to September

Habitat: Sandstone ledges and associated talus slopes along the north side of the summit of Magazine Mountain.

Identifying Characters: The fronds (leaves) of this fern often reach a length of 30 to 50 centimeters (1.0 to a little over 1.6 ft.). This fern has reddish-brown petioles (leaf stalks), while the common woodsia has greenish- or straw-colored petioles. The genus is characterized by a small number of almost petal-like divisions of the indusium (a thin flap or specializing covering over the sorus of ferns) surrounding the cluster of sporangia.

County: Logan

District: Magazine

Sensitive Plants . . .
Part of Your National Forests

The National Forests are managed under the Multiple Use system which calls for using the various forest resources in the combinations that will benefit the most people. Protecting sensitive plants is part of this management.

We need your help in locating and protecting these beauties of the forest. Please let us know if you see any of the plants described in this booklet.

Civilization sometimes takes ruthless toll of beauty as it moves forward. The world has lost much that is beautiful in the name of progress.

The responsibility of protecting the beauty that is left belongs to all of us, especially on our public lands. Let's help each other to keep natural beauty a prominent part of the National Forest system.

1984